

AD-A082 981 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
193068 MLRS, MISSILE NUMBERS 1107, 1104, 1106, ROUND NUMBERS V---ETC(U)
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19306B MLRS, Missile Numbers 1107, 1104, 1106, Round Numbers V-125, V-126 and V-27 are presented in tabular form.		

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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INTRODUCTION

19306B MLRS, Missile Numbers 1107, 1104 and 1106,
Round Numbers V-125, V-126 and V-127, were launched from Snake Site,
White Sands Missile Range (WSMR), New Mexico, at 1112:59, 1113:04 and 1113:11,
on 19 February 1980. The scheduled launch times were 1100, 1100:04 and
1100:08.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), Wind direction and speed, and cloud cover were made at the Snake Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

DENVER 2Km

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 104,500 feet in 500-foot increments.

SITE AND TIME

JALLEN 1100 MST

TABLE 1. Surface Observations taken at 1100 MST,
19 February 1980, at Snake Site, 19306B MLRS,
Missile Numbers 1107, 1104, 1106, Round
Number V-125, V-126, V-127.

ELEVATION	UNKNOWN	FT/MSL
PRESSURE	864.9	HRS
TEMPERATURE	16.3	⁰ C
RELATIVE HUMIDITY	41	
DEW POINT	3.0	⁰ C
DENSITY	1036	GM/M ³
WIND SPEED	01	KTS
WIND DIRECTION	260	DEGREES
CLOUD COVER	10	Ac

PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM **Denver Site** DATE **19 February 1980** TIME **1115 MST**

TRACKER COORDINATES (WSTM) X= 499,064.03 Y= 493,904.12 H= 4123.10

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XX OR FEET AGL .

[illegible][illegible][illegible]

STATION ALTITUDE 4051.00 FEET MSL
19 FEB. 60
ASCENSION NO. 47

SIGNIFICANT LEVEL DATA
050000J0047
JALLET

GEODETIC COORDINATES
33.10712 LAT N
100.49511 LONG E

TABLE 3

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
876.5	4051.0	13.5	12.4	33.0
866.6	4264.2	10.8	3.1	39.0
850.0	4894.7	11.3	2.9	50.0
718.9	9413.6	2.5	-7.0	47.0
713.1	9635.4	4.1	-10.5	34.0
700.0	10137.3	3.6	-16.0	21.0
642.2	12403.0	-1.3	-12.0	41.0
615.4	13521.9	-2.7	-15.7	36.0
597.0	14297.4	-12.0	-19.0	32.0
512.0	18123.0	-17.0	-19.9	78.0
500.0	18713.2	-17.4	-20.1	79.0
482.8	19574.2	-18.6	-21.5	79.0
467.2	20381.8	-18.3	-19.9	77.0
451.6	21215.0	-18.5	-20.5	74.0
400.0	24152.7	-25.6	-26.0	32.0
300.0	30902.0	-41.3	-45.7	39.0
279.4	32380.0	-45.0		
250.0	34790.2	-51.8		
218.9	37631.0	-51.2		
213.9	38127.5	-49.7		
200.0	39573.5	-48.7		
174.4	42527.6	-51.6		
150.0	45707.8	-57.6		
128.0	48943.7	-66.2		
114.4	51163.7	-70.0		
100.0	53911.9	-70.1		
92.8	55263.5	-72.5		
81.4	57421.4	-64.4		
80.6	58025.7	-61.6		
70.0	60983.3	-65.2		
63.7	62776.0	-66.3		
57.4	64987.9	-61.1		
50.0	67715.0	-61.8		
42.2	71174.3	-63.0		
36.4	74215.1	-58.3		
30.0	78227.4	-59.6		
21.6	83021.6	-54.8		
20.0	86620.3	-56.3		
16.2	91071.4	-54.6		
15.0	92723.3	-49.9		

STATION ALTITUDE 4051.00 FEET MSL
 19 FEB. 80
 ASCENSION NO. 41

SIGNIFICANT LEVEL DATA
 030000Z00047
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LONG DEG

TABLE 3 (CONT)

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR	DEWPOINT DEGREES CENTIGRADE	
12.3	97052.4	-46.7		
10.8	99899.9	-48.4		
10.0	101587.0	-45.7		
8.6	104944.0	-42.4		

UPPER AIR DATA
0500030047
JALLEN

STATION ALTITUDE 4051.00 FEET MSL
19 FEB. 70 1100 HRS MST
ASCENSION NO. 47

GEOLYTIC COORDINATES
35.16712 LAT 1EG
106.49511 LONG 1EG

TABLE 4

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (T ₁₀)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.0	876.5	13.5	93.0	1053.5	661.6	00.0	2.9	1.000302
4500.0	862.5	10.9	58.2	1053.9	657.7	130.5	.8	1.000271
5000.0	846.7	11.1	55.6	1054.5	657.9	251.0	3.1	1.000245
5500.0	831.2	10.1	54.8	1019.0	650.7	200.0	6.1	1.000259
6000.0	815.9	9.2	53.8	1004.0	655.5	240.5	9.2	1.000253
6500.0	801.0	8.2	52.8	989.1	654.5	257.0	10.9	1.000249
7000.0	786.5	7.2	51.8	974.5	653.1	259.2	13.3	1.000243
7500.0	771.8	6.2	50.8	960.1	651.9	270.0	16.3	1.000237
8000.0	757.7	5.5	49.8	945.0	650.6	281.6	19.7	1.000232
8500.0	743.8	4.5	48.8	931.0	649.6	283.4	23.3	1.000228
9000.0	730.2	3.5	47.8	916.5	648.4	282.9	27.2	1.000223
9500.0	716.7	3.1	42.2	902.5	648.1	282.2	31.2	1.000217
10000.0	703.4	3.7	24.4	884.1	648.6	281.5	34.4	1.000217
10500.0	690.5	2.8	24.2	870.5	647.5	280.0	37.5	1.000205
11000.0	677.5	1.7	28.0	857.5	646.5	279.4	38.8	1.000201
11500.0	664.6	.7	33.0	844.6	645.0	278.2	40.0	1.000193
12000.0	652.2	-4	37.4	832.0	645.6	272.2	39.7	1.000197
12500.0	639.9	-1.4	40.6	819.5	642.0	263.7	39.0	1.000194
13000.0	627.8	-2.0	38.5	805.8	641.3	265.9	37.1	1.000190
13500.0	615.9	-2.7	36.1	792.4	641.1	264.0	35.6	1.000186
14000.0	604.0	-8.4	45.8	794.1	634.2	265.2	34.4	1.000185
14500.0	592.2	-12.5	53.4	790.1	639.5	267.7	33.5	1.000183
15000.0	580.5	-12.9	56.8	776.4	638.7	269.0	33.8	1.000180
15500.0	568.9	-13.6	60.2	762.9	637.9	271.2	34.2	1.000177
16000.0	557.6	-14.2	63.5	749.8	627.2	271.1	32.9	1.000174
16500.0	546.0	-14.9	66.9	736.5	626.4	271.0	32.0	1.000171
17000.0	535.7	-15.5	70.3	723.7	625.0	270.4	33.7	1.000169
17500.0	525.1	-16.2	73.7	711.2	624.8	270.1	35.7	1.000166
18000.0	514.0	-16.8	77.1	698.8	624.0	273.2	40.9	1.000163
18500.0	504.5	-17.5	78.6	695.9	623.5	275.4	46.1	1.000160
19000.0	494.2	-17.8	79.0	673.6	622.8	274.9	52.3	1.000157
19500.0	484.5	-18.5	79.0	661.9	622.0	274.2	58.5	1.000154
20000.0	474.5	-18.4	83.2	648.4	622.0	268.4	64.0	1.000151
20500.0	464.5	-18.5	86.6	635.0	622.2	265.9	69.6	1.000149
21000.0	455.0	-18.4	84.8	622.5	622.1	257.0	70.2	1.000146
21500.0	446.5	-19.2	83.0	611.6	621.1	251.0	71.3	1.000143
22000.0	437.2	-20.4	81.5	600.1	619.0	240.9	69.8	1.000140
22500.0	428.5	-20.6	79.6	592.0	618.1	245.4	66.9	1.000137
23000.0	419.5	-22.8	77.9	583.4	618.6	245.9	69.2	1.000135
23500.0	410.9	-24.0	76.2	574.5	615.1	244.6	70.2	1.000132

STATION ALTITUDE 4051.00 FEET MSL
19 FEB. 60
ASCESSION NO. 47

UPPER AIR DATA
0500HJ0047
JALLEN

GEODETIC COORDINATES
33.16712 LAT N
106.40511 LONG W

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	402.0	-25.2	74.5	565.3	613.0	247.4	73.5	1.000130
24500.0	394.0	-26.4	73.4	560.1	612.1	249.9	76.9	1.000127
25000.0	385.0	-27.0	72.5	546.8	610.0	252.3	80.4	1.000125
25500.0	377.4	-28.8	71.6	537.7	609.1	254.1	82.9	1.000122
26000.0	369.3	-30.0	70.7	523.8	607.0	255.1	84.4	1.000120
26500.0	361.4	-31.1	69.8	520.0	606.2	255.5	84.8	1.000113
27000.0	353.0	-32.3	68.9	511.4	604.7	255.0	84.5	1.000110
27500.0	346.1	-33.5	68.0	502.9	603.2	255.5	84.9	1.000114
28000.0	338.7	-34.7	67.1	494.0	601.7	255.3	85.4	1.000112
28500.0	331.4	-35.9	66.2	480.5	600.2	255.0	86.0	1.000110
29000.0	324.2	-37.0	65.3	472.4	598.7	254.7	86.5	1.000108
29500.0	317.4	-38.2	64.3	470.6	597.2	254.5	86.8	1.000106
30000.0	310.0	-39.4	63.4	462.8	595.7	254.4	87.8	1.000104
30500.0	303.9	-40.6	62.5	455.2	594.1	253.1	90.4	1.000102
31000.0	297.2	-41.8	61.0	447.0	592.0	250.0	93.9	1.000100
31500.0	290.7	-42.9	60.7	439.9	591.1	257.3	99.0	1.000099
32000.0	284.2	-44.1	59.7	432.3	589.0	250.1	103.8	1.000097
32500.0	277.9	-45.3	58.1**	424.9	588.0	253.5	108.2	1.000095
33000.0	271.5	-46.7	43.8**	417.0	586.2	258.3	112.6	1.000093
33500.0	265.2	-48.2	41.0**	410.8	584.4	257.7	117.0	1.000092
34000.0	259.3	-49.6	19.3**	404.0	582.5	257.1	122.2	1.000090
34500.0	253.4	-51.0	7.1**	397.3	580.7	250.5	126.1	1.000089
35000.0	247.6	-51.4		389.5	579.7	250.2	135.0	1.000087
35500.0	241.8	-51.7		384.4	579.0	250.1	137.2	1.000085
36000.0	236.2	-51.5		371.4	579.9	250.3	136.3	1.000083
36500.0	230.8	-51.4		362.0	580.1	250.0	132.8	1.000081
37000.0	225.3	-51.3		354.1	580.2	257.4	126.8	1.000079
37500.0	220.2	-51.2		345.7	580.4	259.4	119.9	1.000077
38000.0	215.2	-50.1		336.0	581.8	259.0	118.7	1.000075
38500.0	210.2	-49.4		327.4	582.7	250.9	118.9	1.000073
39000.0	205.4	-49.1		319.4	583.1	261.9	118.3	1.000071
39500.0	200.7	-48.8		311.0	583.0	263.0	117.7	1.000069
40000.0	196.1	-49.1		305.0	583.1	263.1	112.4	1.000068
40500.0	191.0	-49.6		298.6	582.5	262.9	105.9	1.000067
41000.0	187.2	-50.1		292.4	581.8	261.2	99.0	1.000065
41500.0	182.9	-50.6		286.3	581.2	253.7	92.1	1.000064
42000.0	178.7	-51.1		280.4	580.5	253.7	85.7	1.000062
42500.0	174.0	-51.6		274.5	579.9	252.2	80.4	1.000061
43000.0	170.3	-52.5		269.2	578.7	246.1	75.5	1.000060
43500.0	166.3	-53.4		264.1	577.5	243.4	73.8	1.000059

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
 19 FEB. 80 1100 HRS MSL
 ASCENSION NO. 47

UPPER AIR DATA
 0500030047
 JALLEN

GEODETIC COORDINATES
 33.15712 LAT (EG
 106.49511 LONG (EG

TABLE 4 (CONT)

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ WATER	SPEED OF SOUND M/SEC	DIRECTION OF WIND DEGREES (TRUE)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	162.6	-54.4		259.0	576.2	243.3	73.5	1.000058
44500.0	158.8	-55.3		254.0	575.0	241.4	73.4	1.000057
45000.0	155.1	-56.3		249.2	573.7	244.0	75.7	1.000055
45500.0	151.5	-57.2		244.4	572.5	246.5	78.2	1.000054
46000.0	147.9	-58.4		239.8	570.9	248.9	80.7	1.000053
46500.0	144.3	-59.7		235.5	569.2	251.4	82.9	1.000052
47000.0	140.8	-61.0		231.2	567.4	253.6	85.3	1.000051
47500.0	137.4	-62.4		227.1	565.6	254.1	85.9	1.000051
48000.0	134.1	-63.7		223.0	563.8	254.0	81.7	1.000050
48500.0	130.8	-65.0		219.0	562.0	254.3	76.8	1.000049
49000.0	127.6	-66.3		215.0	560.3	255.3	74.4	1.000048
49500.0	124.3	-67.2		210.5	559.2	256.3	70.2	1.000047
50000.0	121.4	-68.0		206.1	558.0	255.7	70.4	1.000046
50500.0	118.3	-68.9		201.8	556.8	255.1	70.7	1.000045
51000.0	115.4	-69.7		197.6	555.7	252.6	74.2	1.000044
51500.0	112.5	-70.0		192.9	554.3	250.0	78.3	1.000043
52000.0	109.7	-70.0		183.1	553.2	250.0	80.7	1.000042
52500.0	106.9	-70.1		183.4	553.2	250.2	82.3	1.000041
53000.0	104.2	-70.1		175.8	553.2	251.0	80.1	1.000040
53500.0	101.6	-70.1		174.3	553.1	252.0	73.7	1.000039
54000.0	99.0	-70.4		170.2	554.7	254.7	66.1	1.000038
54500.0	96.5	-71.2		160.5	553.6	258.2	54.7	1.000037
55000.0	94.1	-72.1		163.0	552.4	253.4	43.6	1.000036
55500.0	91.7	-72.2		159.0	552.2	254.3	41.6	1.000035
56000.0	89.4	-71.6		154.5	553.1	253.2	39.4	1.000034
56500.0	87.1	-71.0		150.1	553.9	253.1	40.6	1.000033
57000.0	84.9	-70.4		145.9	554.7	250.1	42.9	1.000032
57500.0	82.8	-69.8		141.6	555.5	257.9	43.8	1.000032
58000.0	80.7	-62.6		133.6	555.2	250.2	42.9	1.000030
58500.0	78.7	-62.2		130.0	553.8	254.4	41.9	1.000029
59000.0	76.8	-62.8		127.2	555.0	253.2	39.7	1.000028
59500.0	75.0	-63.5		124.5	564.1	251.9	37.5	1.000027
60000.0	73.1	-64.1		121.9	563.3	249.5	35.7	1.000027
60500.0	71.3	-64.7		119.2	562.4	246.3	34.3	1.000027
61000.0	69.6	-65.3		115.6	561.7	242.3	33.6	1.000026
61500.0	67.9	-65.6		113.9	561.3	239.4	36.8	1.000025
62000.0	66.2	-65.8		111.3	560.9	229.5	40.5	1.000025
62500.0	64.6	-66.1		107.7	560.5	224.4	40.1	1.000024
63000.0	63.0	-65.3		105.8	561.0	212.3	37.1	1.000024
63500.0	61.3	-64.5		102.6	562.7	201.4	35.4	1.000023

UPPER AIR DATA
0500000047
JALLEN

STATION ALTITUDE 4051.00 FEET MSL
19 FEB. 60 1100 HRS MSL
ASCEN. STOP NO. 47

GEOMETRIC ALTITUDE 4051.00 FEET MSL
19 FEB. 60 1100 HRS MSL
ASCEN. STOP NO. 47

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TYP)	SPEED KNOTS	INDEX OF REFRACTION
6400.0	60.0	-63.3		99.6	56.4	103.1	28.0	1.000022
6450.0	58.5	-62.1		96.6	56.0	132.7	23.9	1.000022
6500.0	57.1	-61.1		93.8	56.7	122.1	27.5	1.000021
6550.0	55.7	-61.3		91.0	56.7	109.2	24.8	1.000020
6600.0	54.4	-61.4		89.4	56.9	94.3	23.7	1.000020
6650.0	53.1	-61.5		87.3	56.8	80.9	23.1	1.000019
6700.0	51.8	-61.6		85.3	56.6	73.3	17.5	1.000019
6750.0	50.5	-61.7		83.3	56.4	64.0	12.2	1.000019
6800.0	49.3	-61.9		81.3	56.2	50.5	8.4	1.000018
6850.0	48.1	-62.1		79.4	56.0	54.7	6.8	1.000018
6900.0	46.9	-62.2		77.5	56.3	61.4	5.2	1.000017
6950.0	45.8	-62.4		75.7	56.5	74.2	5.8	1.000017
7000.0	44.7	-62.6		74.0	56.5	61.3	9.8	1.000016
7050.0	43.6	-62.8		72.2	56.5	64.2	13.8	1.000016
7100.0	42.6	-62.9		70.5	56.8	64.6	18.0	1.000016
7150.0	41.5	-62.5		69.7	56.5	84.4	22.4	1.000015
7200.0	40.5	-61.7		68.8	56.5	64.2	26.7	1.000015
7250.0	39.6	-61.0		65.0	56.7	63.9	28.4	1.000014
7300.0	38.6	-60.2		63.2	56.8	83.7	27.7	1.000014
7350.0	37.7	-59.4		61.4	56.9	83.4	27.1	1.000014
7400.0	36.8	-58.6		59.7	57.0	83.1	25.5	1.000013
7450.0	35.9	-58.4		58.2	57.0	82.9	23.2	1.000013
7500.0	35.1	-58.6		56.9	57.0	82.5	20.8	1.000013
7550.0	34.2	-58.7		55.6	57.0	61.0	19.1	1.000012
7600.0	33.4	-58.9		54.3	57.0	80.7	18.0	1.000012
7650.0	32.6	-59.0		53.0	57.0	79.3	16.9	1.000012
7700.0	31.8	-59.2		51.8	56.9	78.4	16.3	1.000012
7750.0	31.1	-59.4		50.6	56.9	78.4	16.4	1.000011
7800.0	30.3	-59.5		49.5	56.9	78.4	16.5	1.000011
7850.0	29.6	-59.6		48.3	56.9	80.3	17.0	1.000011
7900.0	28.9	-59.8		47.1	56.9	85.3	18.3	1.000010
7950.0	28.2	-59.9		46.0	56.9	90.0	19.8	1.000010
8000.0	27.5	-59.7		44.9	56.9	93.8	21.3	1.000010
8050.0	26.9	-59.7		43.9	56.9	97.5	21.8	1.000010
8100.0	26.2	-59.7		42.8	56.9	100.9	22.3	1.000010
8150.0	25.6	-59.7		41.8	56.9	104.2	23.0	1.000009
8200.0	25.0	-59.7		40.8	56.9	106.0	22.7	1.000009
8250.0	24.4	-59.7		39.6	56.9	107.2	22.0	1.000009
8300.0	23.8	-59.7		38.9	56.9	103.4	21.3	1.000009
8350.0	23.2	-59.8		38.0	56.9	106.5	21.2	1.000009

STATION ALTITUDE 4051.00 FEET MSL
 19 FEB. 60 1100 HRS MSL
 ASCENSION NO. 47

UPPLR AIR DATA
 0500030047
 JALLER

GEODETIC COORDINATES
 33.16712 LAT (LG)
 106.49511 LONG (LG)

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (TR)	SPEED KNOTS	INDEX OF REFRACTION
8400.0	22.7	-59.8		37.0	509.1	105.8	22.9	1.000004
8450.0	22.2	-59.8		36.2	509.1	105.4	24.1	1.000006
8500.0	21.6	-59.8		35.3	509.0	101.5	26.3	1.000008
8550.0	21.1	-58.8		34.3	510.4	97.1	30.2	1.000008
8600.0	20.6	-57.7		33.3	511.9	93.7	34.5	1.000007
8650.0	20.1	-56.6		32.4	513.3	91.0	38.8	1.000007
8700.0	19.6	-56.2		31.5	513.9	89.1	41.5	1.000007
8750.0	19.2	-56.0		30.8	514.1	87.8	42.6	1.000007
8800.0	18.7	-55.8		30.0	514.4	86.4	43.6	1.000007
8850.0	18.3	-55.6		29.3	514.6	85.3	46.6	1.000007
8900.0	17.9	-55.4		28.6	514.9	83.8	41.0	1.000006
8950.0	17.5	-55.2		27.9	515.1	80.8	37.3	1.000006
9000.0	17.0	-55.0		27.2	515.4	80.5	33.7	1.000006
9050.0	16.6	-54.8		26.6	515.6	87.4	30.2	1.000006
9100.0	16.3	-54.6		25.9	515.9	83.7	26.8	1.000006
9150.0	15.9	-53.4		25.2	517.5	90.4	23.3	1.000006
9200.0	15.5	-52.0		24.4	519.4	92.7	19.9	1.000005
9250.0	15.2	-50.5		23.7	521.3	93.4	18.4	1.000005
9300.0	14.8	-49.7		23.1	522.4	93.8	17.2	1.000005
9350.0	14.5	-49.3		22.5	522.8	94.1	16.8	1.000005
9400.0	14.1	-49.0		22.0	523.3	94.6	14.8	1.000005
9450.0	13.8	-48.6		21.4	523.8	93.4	14.4	1.000005
9500.0	13.5	-48.2		20.9	524.3	91.6	14.2	1.000005
9550.0	13.2	-47.8		20.4	524.8	89.7	14.0	1.000005
9600.0	12.9	-47.5		19.9	525.2	87.6	13.8	1.000004
9650.0	12.6	-47.1		19.4	525.7	92.4	14.3	1.000004
9700.0	12.3	-46.7		19.0	526.2	100.2	15.5	1.000004
9750.0	12.1	-47.0		18.6	526.9	100.9	16.9	1.000004
9800.0	11.8	-47.3		18.2	527.5	112.5	18.4	1.000004
9850.0	11.5	-47.6		17.8	528.1	120.7	20.9	1.000004
9900.0	11.3	-47.9		17.4	528.7	130.1	24.7	1.000004
9950.0	11.0	-48.2		17.0	529.4	130.3	29.0	1.000004
10000.0	10.8	-48.2		16.7	529.3	141.0	33.6	1.000004
10050.0	10.5	-47.4		16.2	535.3	140.3	35.9	1.000004
10100.0	10.3	-46.6		15.8	538.3	152.6	33.5	1.000004
10150.0	10.0	-45.8		15.4	547.4	159.8	31.6	1.000003
10200.0	9.8	-45.3		15.0	546.1	167.8	30.2	1.000003
10250.0	9.6	-44.8		14.8	546.7			1.000003
10300.0	9.4	-44.3		14.3	549.3			1.000003
10350.0	9.2	-43.8		13.9	550.0			1.000003

STATION ALTITUDE 4021.00 FEET MSL
 19 FEB. 60 1100 HRS MSL
 ASCENSION NO. 47

UPPER AIR DATA
 0500030047
 JALLER

GEODETIC COORDINATES
 33.13712 LAT (LG)
 106.49511 LONG (LG)

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KILOMETERS PER SECOND	WIND DATA DIRECTION, DEGREES (T)	SPEED KILOMETERS PER HOUR	INDEX OF REFRACTION
104000.0	9.0	-43.3		13.6	350.6			1.000013
104500.0	8.8	-42.8		13.3	341.2			1.000013

STATION ALTITUDE 4051.00 FEET MSL
19 FEB. 60
ASCENSION NO. 47

MANDATORY LEVELS
030000Z0047
JALLEN

STATION ALTITUDE 4051.00 FEET MSL
19 FEB. 60
ASCENSION NO. 47

MANDATORY LEVELS
030000Z0047
JALLEN

TABLE 5

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUMID.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	UP/POINT CENTIGRADE	PERCENT		DIRECTION DEGREES (TH)	SPEED KNOTS
850.0	4801.	11.3	2.0	50.		227.2	2.5
800.0	6504.	8.1	-5.9	53.		250.3	11.1
750.0	8283.	4.7	-5.0	49.		282.8	21.6
700.0	10121.	3.6	-10.0	41.		281.2	33.2
650.0	12079.	-0.6	-13.1	30.		271.5	33.7
600.0	14157.	-10.5	-19.0	49.		260.7	34.0
550.0	16333.	-14.7	-19.0	79.		271.1	32.1
500.0	18648.	-17.4	-20.1	74.		273.2	40.6
450.0	21271.	-18.7	-20.0	64.		253.3	70.9
400.0	24114.	-23.6	-28.8	74.		240.1	74.4
350.0	27205.	-32.0	-30.7	60.		253.3	64.7
300.0	30743.	-41.3	-45.7	62.		253.3	91.8
250.0	34717.	-51.8				250.2	131.2
200.0	39407.	-48.7				263.1	117.6
175.0	42350.	-51.5				252.0	61.1
150.0	45588.	-57.6				247.4	79.2
125.0	49279.	-67.0				250.1	70.9
100.0	53607.	-70.1				253.7	70.1
80.0	57902.	-61.8				253.0	42.6
70.0	60883.	-65.2				244.2	33.2
60.0	63761.	-63.3				183.2	23.7
50.0	67467.	-61.8				50.2	10.4
40.0	71987.	-61.3				84.1	23.7
30.0	77901.	-59.6				78.4	10.6
25.0	81602.	-53.7				103.9	27.8
20.0	86230.	-50.3				90.0	39.6
15.0	92273.	-49.9				93.0	10.0
10.0	101052.	-45.7				160.5	31.4

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.